

SEP 13 2005

67,010-089; H2751-ED

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James Gustafson
Serial No.: 10/804,305
Filed: 3/19/2004
Art Unit: 2834
Examiner: Lam, Thanh
Title: FLUID-SUBMERGED ELECTRIC MOTOR

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION

Dear Sir:

In response to the final office action mailed on July 14, 2005, Applicant respectfully requests the Examiner reconsider the rejections based upon the comments below.

The Examiner objected to the Amendment filed on May 31, 2005 under 35 U.S.C. §132(a) as introducing new matter. The Examiner contends that "an engine", "a gas engine", and "engine oil" as recited in claims 17-19 and 23 introduce new matter that is not supported by the original disclosure. The Examiner's attention is directed to MPEP § 2163.06, which states that if new matter is added to the claims, the examiner should reject the claims under 35 U.S.C. 112, first paragraph. The Examiner should still consider the subject matter added to the claim making rejections based upon prior art since the new matter rejection may be overcome by

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applicant. Thus, the Applicant respectfully requests that the Examiner consider the subject matter of claims 17-19, or withdraw the rejection.

Regarding claims 17-19 and 23, the Examiner's attention is directed specifically to the Background section of the Applicant's application. The Applicant describes electric starters for starting small engines and gas turbine engines. Further, in the Brief Description of the Drawings section, Figure 5 is described as being representative of an engine starter system. Furthermore, engine oil is referred to in paragraph 17 as commonly used synthetic gas turbine engine oil. Additionally, in paragraph 26, a starter system is referred to for an engine. There may be additional examples. These examples provide support for claims that recite an engine, a gas engine, and engine oil. Accordingly, claims 17-19 and 23 contain no new matter and Applicant respectfully requests that the objection be withdrawn.

The Examiner rejected claims 1, 4-6, and 10-23 under 35 U.S.C. §102(b) as being anticipated by *Arutunoff*. Regarding claim 1, the Examiner contends that the electric motor assembly of *Arutunoff* includes a fluid circulation circuit having a housing with a cavity and is fluidly connected to the fluid circulation circuit. The Examiner further states that an electric motor component 4 is disposed in the cavity and a thermally conductive fluid circulates through the cavity to substantially submerge the electric motor component 4. The Examiner has failed to give patentable weight to the terminology "substantially submerged."

The meaning of claim terms is to be construed in light of the intrinsic evidence, including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316-1318 (Fed. Cir. 2005). Applicant's paragraph 17 refers to the cavity being "filled" with fluid. Paragraph 20 refers to

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"constant intimate contact" with fluid and paragraph 21 refers to the fluid being "constantly in contact." Thus, the term "substantially submerged" requires constant contact with the fluid.

The electric motor component (stator 4) of *Arutunoff* includes two sets of coils 18. The electric motor assembly of *Arutunoff* operates in a vertical position such that a lower set of coils near the line *b-b* is submerged while the upper set of coils 18 above the line *a-a* is not submerged and contacts fluid only when the pump operates to circulate the fluid within the motor. The fluid flows in spaces *k'* between the upper coils 18 and does not contact the stator coils. The operation is similar for the embodiment shown in Figure 6. Thus, the electric motor component (stator 4) is not "substantially submerged." Accordingly, claim 1 is properly allowable.

Regarding claim 5, the Examiner contends that *Arutunoff* discloses a thermally conductive fluid that is a dielectric fluid. *Arutunoff* discloses the use of an internal liquid or oil, but does not disclose the use of a dielectric fluid which provides a benefit of relatively high electrical resistance. Accordingly, claim 5 is properly allowable.

Regarding claim 6, as described above, *Arutunoff* does not disclose a dielectric fluid. Therefore, a dielectric oil as recited in claim 6 is properly allowable.

Regarding claim 10, the Examiner contends that *Arutunoff* discloses that the housing has a fluid inlet and a fluid outlet for circulation of the dielectric fluid to and from a cavity. The Applicant respectfully disagrees. The electric motor of *Arutunoff* includes a housing 1 having a stopper 25 within an opening in the housing 1. The liquid circulates within the housing 1, but does not circulate into or out of the opening in the housing 1. Therefore, *Arutunoff* does not disclose a housing inlet and housing outlet for fluid circulation as recited in Applicant's claim. Accordingly, claim 10 is properly allowable.

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Regarding claim 11, the Examiner contends that *Arutunoff* discloses a heat exchanger in communication with the dielectric fluid. The Examiner failed to point out which component is a heat exchanger, and Applicant is unable to find any reference to a heat exchanger in the reference. Applicant's invention includes a heat exchanger separate from the motor that receives heated dielectric fluid from the motor and removes heat from the dielectric fluid before sending fluid to a separate fluid reservoir. Respectfully, the Applicant requests the Examiner to clarify or withdraw the rejection.

Regarding claim 12, the Examiner contends that *Arutunoff* discloses a filter connected upstream of the housing to filter particles from the dielectric fluid. Applicant respectfully disagrees. *Arutunoff* discloses an oil filter 24 that is within the housing 1. Therefore, the oil filter 24 is not connected upstream of the housing 1, rather it is connected within the housing 1 and is neither upstream nor downstream of the housing 1. Accordingly, claim 12 is properly allowable.

Regarding claim 15, the Examiner contends that *Arutunoff* discloses a rotor that is rotatable about an axis while substantially submerged in a dielectric fluid to circulate the dielectric fluid through a cavity. Applicant respectfully disagrees. In the embodiments shown in Figures 1-5, the oil moves through a hollow shaft 6 of the rotor and does not substantially submerge the rotor as understood from Applicant's written description. In the embodiment shown in Figure 6, the space occupied by the rotors is kept free from oil to avoid unnecessary friction between the oil and the rotor during rotor rotation. Thus, the rotor of *Arutunoff* is not substantially submerged in oil nor is it rotatable while submerged in oil as recited in Applicant's claim 15. Accordingly, claim 15 is properly allowable.

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Regarding claim 16, the Examiner contends that *Arutunoff* discloses a fluid circulation circuit that includes a portion that is outside of the housing. While it is well settled that terms in a claim are to be given the broadest reasonable interpretation, this interpretation must be consistent with the specification, with the claim language being read in light of the specification as will be interpreted by one of ordinary skill in the art. The housing functions to surround and contain the motor components, for example. A portion that is outside the housing is exterior to the housing and the motor. In *Arutunoff*, the oil remains within the housing 1 and does not circulate through a fluid circulation portion that is exterior to the housing 1. Thus, even broadly construed, the interpretation that *Arutunoff* includes a portion that is outside of the housing cannot be sustained. Accordingly, claim 16 is properly allowable.

Regarding claims 20-23, the Examiner contends that the apparatus of *Arutunoff* discloses the claimed method. The Applicant respectfully disagrees. As described above, *Arutunoff* does not disclose circulating a dielectric fluid. Accordingly, claims 20-23 are properly allowable.

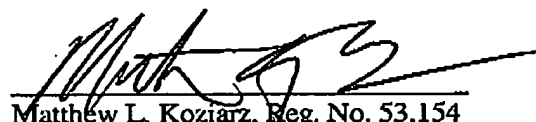
Regarding claim 23, *Arutunoff* discloses circulating a fluid within a motor housing and does not disclose circulating a dielectric fluid between a motor housing cavity and an engine as recited in Applicant's claim. For this additional reason, claim 23 is properly allowable.

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Applicant believes that no additional fees are necessary, however, the Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional fees or credit the account for any overpayment.

Respectfully submitted,

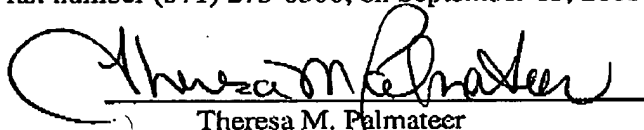
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CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (571) 273-8300, on September 13, 2005.


Theresa M. Palmateer

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